

ABSTRACT OF THE DISCLOSURE

The present invention relates to the tailoring the reflectivity spectrum of a SGDBR by applying digital sampling theory to choose the way each reflector is sampled. The resulting mirror covers a larger wavelength span and has peaks with a larger, more uniform, coupling constant ( $\kappa$ ) than the mirrors produced using conventional approaches. The improved mirror also retains the benefits of the sample grating approach. Additionally, most of the embodiments are relatively simple to manufacture.

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